REMARKS

The present amendment is submitted in response to the Office Action mailed on March 14, 2005. Claims 10 and 13-16 are currently pending in the application. By the present amendment, Claim 10 has been amended to correct some minor informalities. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Claim Objections

In the Office Action, Claim 10 was objected to for some minor informalities. Claim 10 has been amended in a manner which is believed to obviate the objection and in conformance with the Examiner's recommended amendment. Accordingly, withdrawal of the objection is respectfully requested.

35 U.S.C. §102(b)

Claims 10 and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 6,647,519 (hereinafter Lometti).

Applicants respectfully traverse the rejection of claims 10 and 13 under 35 U.S.C. §102(b). It is respectfully submitted that claims 10 and 13 are patentable over Lometti for at least the following reasons and is therefore allowable.

Applicant appreciates the courtesy granted to Applicant's attorney, Michael A. Scaturro (Reg. No. 51,356), during a telephonic interview conducted on June 1, 2005. . During the telephonic interview, a number of issues were raised and discussed primarily with reference to Claim 10. First, Applicant's attorney stated that, with reference to Claim 10, Lometti does not teach the step of:

performing a secondary task in each of the plurality of the networked devices, wherein performing the secondary task in a first one of the plurality of the networked devices includes generation, per time step, a respective numerical value that depends on a corresponding numerical value in each of the others of the plurality of networked devices at a previous time step;

During the interview, the Examiner made reference to the 16 byte validation block at Col. 4, line 16 of Lometti and the computations at Col. 4, lines 40-45 in support of the Examiner's statement alleging that Lometti teaches the performance of a secondary task in each of the plurality of networked devices.

Applicant's Attorney, respectfully pointed out to the Examiner that, the 16 byte validation block is not a computed value, but is instead a test vector injected into the system. Further, with regard to the computations cited by the Examiner at Col. 4, lines 40-45 of Lometti, these values are not computed (a) per time step, and as such (b) do not depend on corresponding numerical values in each of the others of the plurality of networked devices at a previous time step, as recited in Claim 10.

Regarding point (a), as recited in the specification, one of the problems that the present invention seeks to solve is how to build a control and security system that issues

an alarm in case of a failure, that may be caused by natural or malicious influences. To thwart a virus or hacker, a set of equations is performed in each device during each time step, which depend on values of the devices taken at the previous time steps. The set of equations are compared with a corresponding set of equations that are computed by a simulator at each time step. This makes undetected hacking or interfering with the subject system computationally a very complex task. There is no teaching or disclosure in Lometti of performing a system of computations per time step. This is true because Lometti is directed to a method and circuit for mismatch detection and not a security system. As such, while the mismatch detection may be performed periodically, there is no teaching or disclosure, implicit or explicit, of performing the mismatch detection, per time step. This is true because misconnection events do not occur with a frequency rate that warrants the type of computations described in Claim 10, per time step.

Regarding point (b), assuming arguendo, that Lometti teaches the performance of a secondary task, the secondary task of Lometti is not a *respective numerical value that depends on a corresponding numerical value in each of the others of the plurality of networked devices at a previous time step*, as recited in Claim 10. While, the method of Lometti may be performed in any device in the network, there is no teaching or disclosure of the computations performed at Col. 4, lines 40-45, or the 1-byte and 16-byte validation codes having any dependency whatsoever on values performed in other networked devices at a previous time step. The method of Lometti is performed in isolation in each of the networked devices in which a mismatch detection circuit is installed.

During the interview a further point of distinction was raised by Applicant's Attorney. Specifically, Applicant's Attorney stated that, with reference to Claim 10, Lometti does not teach the steps of:

receiving, at a control server, update information regarding the stat of each of the plurality of networked devices;

simulating, in the control server, the secondary task of each of the plurality of the networked devices, wherein simulating the secondary task in the control server includes generating, per time step, numerical values for each of the simulated tasks, based at least upon the receive update information;

receiving, at the control server, the numerical values generated by the plurality of the networked devices;

determining by the control server whether the received numerical values are equal to the simulated values; and

generating an alert if it is determined that received numerical values are not equal to the simulated values;

During the interview, Applicant's Attorney explained that Lometti doe not teach or disclose the use of a control server. The Examiner responded by stating that the mismatch detection circuit, while not explicitly referring to it as a control server, can be located at any receiver. Applicant's Attorney explained that the mismatch detection circuit does not perform the functions of a control server, in general, or in particular as it relates to the present invention. The mismatch detection circuit is more appropriately analogous to one of the network devices of the present invention, as recited in Claim 10. The control server is utilized in the present invention for receiving a plurality of

computations from the respective networked devices, while simultaneously simulating the computations at the control server, and comparing the computations from the respective networked devices with the simulated computations to determine if there the received values are equal to the simulated values. If any one of the comparisons results in an inequality, an alarm signal is generated.

Lometti, by contrast, performs a mismatch detection in some number of networked devices that incorporate the mismatch detection circuit. In each device a comparison is made between a received target vector with an internally stored target vector to determine if there is a mismatch at that device. This process is performed in isolation at each device that incorporates the mismatch detection circuit. As such, there is no teaching or disclosure of transferring values to a central server, where central server simulated values are compared to received values from a plurality of networked devices, as recited in Claim 10. In other words, the plurality of devices of the present invention work in concert with a central server to compare independently computed values to determine if the subject system has been compromised at each time step.

It is respectfully submitted that at least the limitations and/or features of independent Claim 10 as amended is believed to be patentably distinct over Lometti. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of claim 10 is respectfully requested.

Claim 13 depends from independent Claim 10 and therefore contain the limitations of Claim 10 and are believed to be in condition for allowance for at least the same

reasons given for Claim 10 above. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) and allowance of Claim 13 is respectfully requested.

35 U.S.C. §103(a)

Dependent Claims 14-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lometti in view of Official Notice.

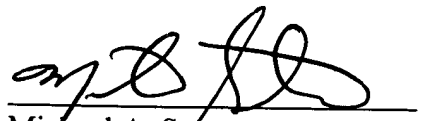
Claims 14-16 depend from Claim 10, and therefore includes the limitations of Claim 10. Accordingly, for the same reasons given above for Claim 10, Claims 14-16 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejections with respect to Claims 14-16 and allowance of Claims 14-16 is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 10 and 13-16 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Dicran Halajian, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-333-9607.

Respectfully submitted,



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